

Novel Guidance Kit to use magnetic bearings to improve mortar accuracy - Army

**Proposed Recipient:** Science Applications International Corporation

**Address of Proposed Recipient:** 4988 Petrell Blvd, Kings Bay, GA 31547

**Amount of Request:** \$5 Million

**Explanation of Request**

**Purpose:** The Army has a requirement to develop affordable precision guidance capabilities for its existing artillery rounds. These “guidance kits” will be used to retrofit existing 105 mm and 155 mm field artillery to improve lethality, reduce collateral damage, and provide effective operation in urban environments. Several recent efforts have focused on using traditional mechanical bearings in the system design solution, and have encountered problems due to the extreme forces and shell rotation rates inherent in field artillery. The NGK RDT&E effort will focus on a new magnetic bearing technology that is more reliable and accurate than mechanical bearings. The funding builds on previous prototypes and live fire demonstrations and will cover design, development, and testing of a magnetic bearing Novel Guidance Kit and demonstrate the systems’ ability to meet the Army’s operating requirements.

**Why is it a good use of Taxpayer funds:** Delivers low cost, accurate, extended range, artillery projectile capable of greater than 35km range, better than 20 meter CEP accuracy, and less than \$10,000 unit purchase cost. This effort will deliver a capability for the Army’s need for improved lethality, reduced collateral damage, and effective operation in urban environments.